

## SECURE PROCESSOR-BASED SYSTEM AND METHOD

### ABSTRACT OF THE DISCLOSURE

A computer system includes a central processor unit ("CPU"), a dynamic random access memory ("DRAM") device, a key storage device storing a decryption key, a decryption engine and a system controller coupling the CPU to the DRAM. All of these components are fabricated on a common integrated circuit substrate so that interconnections between these components are protected from unauthorized access. The system controller is also coupled through to a non-volatile memory that stores a computer program that has been encrypted. In operation, the computer program is transferred through the system controller to the decryption engine, which uses the decryption key to decrypt the computer program. The CPU executes the encrypted program, and, in doing so, transfers data between the CPU and the system memory. This data is protected from unauthorized access because the connections between the CPU and the system memory are internal to the integrated circuit.